

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Parthasarathy Ranganathan et al.

Confirmation No.: TBD

Application No.: TBD

Examiner: TBD

Filing Date: Herewith

Group Art Unit: TBD

Title: OPTIMIZING LIFETIME OF A DISPLAY

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir

This Information Disclosure Statement is submitted:

- (x) under 37 CFR 1.97 (b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- () under 37 CFR 1.97 (c) together with either a:
 - () Statement under 37 CFR 1.97(e), or
 - () a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- () under 37 CFR 1.97 (d) together with a:
 - () Statement under 37 CFR 1.97(e)(1) or (2), and
 - () a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, or before payment of the issue fee)

Please charge to Deposit Account 08-2025 the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

() A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

() I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: _____
OR
() I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number _____ on _____

Respectfully submitted

Parthasarathy Ranganathan et al.

10

Ashok K. Manocha

Attorney/Agent for Applicant(s)
Reg. No. 45.301

Date: April 23, 2004

Telephone No.: (703) 628-1461

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT
(Use several sheets if necessary)

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
200400352-1		
APPLICANT		
Parthasarathy Ranganathan		
FILING DATE	GROUP	
Herewith		

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
/VK/	1A 2003/0135288	July 17, 2003	Ranganathan et al.	
/VK/	1B 2003/0156074	Aug. 21, 2003	Ranganathan et al.	
/VK/	1C 6,456,016	Sept. 24, 2002	Sundahl et al.	
	1D			
	1E			
	1F			
	1G			
	1H			
	1I			
	1J			
	1K			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
		1L				
		1M				
		1N				
		1O				
		1P				

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	Bloom, L. et al., "Investigating the Relationship Between Battery Life and User Acceptance of Dynamic, Energy-Aware Interfaces on Handhelds", Hewlett Packard Technical Report, Downloaded from the Internet on 4/22/04.
/VK/	1R	Choi, I. et al., "Low-Power Color TFT LCD Display for Hand-Held Embedded Systems", August 2002.
/VK/	1S	Draffan, E.A. et al., "Colour and Contrast Accessibility Issues: For the Design of E-Learning Materials", May 2003.

EXAMINER

/Vincent Kovalick/

DATE CONSIDERED

07/15/2008

PATENT APPLICATION

Sheet 1 of 1

FORM PTO-1449		ATTY. DOCKET NO. 200400352-1	APPLICATION NO	CONFIRMATION NO.
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT Parthasarathy Ranganathan		
(Use several sheets if necessary)		FILING DATE Herewith	GROUP	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A				
1B				
1C				
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	eTForecasts, "Worldwide PDA & Smartphone Forecast 1998-2008", June 2003.
/VK/	1R	Flinn, J. et al., "Energy-Aware Adaptation for Mobile Application", 1999.
/VK/	1S	Geelhoed, E. et al., "Energy-Aware User Interfaces and Energy-Adaptive Displays: Improving Battery Lifetimes in Mobile Devices", Proceedings of HP TechCon, June 2004; Downloaded from the Internet on 4/22/04.

EXAMINER <i>/Vincent Kovalick/</i>	DATE CONSIDERED <i>07/15/2008</i>
---------------------------------------	--------------------------------------

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
200400352-1		
APPLICANT	Parthasarathy Ranganathan	
FILING DATE	Herewith	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A				
1B				
1C				
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	Harter, T. et al., "Energy-Aware User Interfaces: An Evaluation of User Acceptance", Proceedings of the Annual Conference on Human Factors in Computing Systems, 2004; Downloaded from the Internet on 4/22/04.
/VK/	1R	Harter, T. et al., "The Potential for Energy-Aware User Interfaces on Handheld Devices", November 2003.
/VK/	1S	Iyer, S. et al., "Energy-Aware Display System Designs for Future Mobile Environments", ACM Press, 2003.

EXAMINER

/Vincent Kovalick/

DATE CONSIDERED

07/15/2008

FORM PTO-1449		ATTY. DOCKET NO. 200400352-1	APPLICATION NO.	CONFIRMATION NO.
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT Parthasarathy Ranganathan		
(Use several sheets if necessary)		FILING DATE Herewith	GROUP	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A				
1B				
1C				
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	Kamijoh, N. et al., "Energy Trade-Offs in the IBM Wristwatch Computer", IBM Research Division, October 2001. Abstract.
/VK/	1R	Pering, T. et al., "The Simulation and Evaluation of Dynamic Voltage Scaling Algorithms", ACM ISBN August 2000.
/VK/	1S	Richardson, T. et al., "Virtual Network Computing", IEEE Internet Computing, Jan/Feb 1998.

EXAMINER

/Vincent Kovalick/

DATE CONSIDERED

07/15/2008

PATENT APPLICATION

Sheet 1 of 1

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO. 200400352-1	APPLICATION NO	CONFIRMATION NO.
APPLICANT		
Parthasarathy Ranganathan Herewith	FILING DATE	GROUP

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A				
1B				
1C				
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	Udani, S. et al., "The Power Broker: Intelligent Power Management for Mobile Computer", Dept of Computer Information Science, University of Pennsylvania, 1996.
/VK/	1R	Viredaz, M. et al., "Energy Management on Handheld Devices", ACM Press, 2003.
/VK/	1S	Viredaz, M. et al., "Power Evaluation of a Handheld Computer", IEEE Micro, 2003.

EXAMINER

/Vincent Kovalick/

DATE CONSIDERED

07/15/2008

PATENT APPLICATION

Sheet 1 of 1

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.	APPLICATION NO.	CONFIRMATION NO.
200400352-1		
APPLICANT		
Parthasarathy Ranganathan		

FILING DATE
Herewith

GROUP

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
1A				
1B				
1C				
1D				
1E				
1F				
1G				
1H				
1I				
1J				
1K				

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
1L					
1M					
1N					
1O					
1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

/VK/	1Q	Xiong, S. et al., "A Simple and Flexible Driver for OLED", ASID, 1999. Abstract.
	1R	
	1S	

EXAMINER

/Vincent Kovalick/

DATE CONSIDERED

07/15/2008